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DOCKET NO: D0540-700410

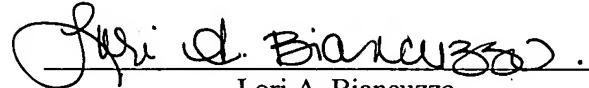
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David J. Hunniford, et al.  
Serial No: 10/700,381  
Confirmation No: 5795  
Filed: November 4, 2003  
For: METHODS AND APPARATUS FOR REDUCING NITRATE  
DEMANDS IN THE REDUCTION OF DISSOLVED AND/OR  
ATMOSPHERIC SULFIDES IN WASTEWATER

Examiner: Not Yet Assigned  
Art Unit: 1724

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 27<sup>th</sup> day of July, 2004.



Lori A. Biancuzzo

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents:

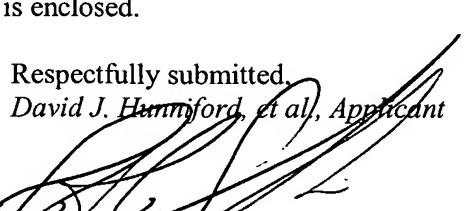
Statement Filed Pursuant to the Duty of Disclosure Under 37 CFR §§1.56, 1.97 and 1.98,  
Form PTO-1449  
 Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 395-7000.

A check is not enclosed. If a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 50/2762. A duplicate of this sheet is enclosed.

Respectfully submitted,  
*David J. Hunniford, et al., Applicant*

By



Robert A. Skrivanek, Jr., Reg. No. 41,316  
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Docket No. D0540-700410

Date: July 27, 2004

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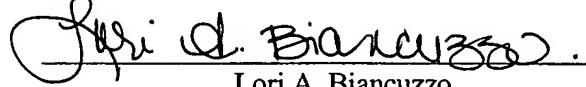
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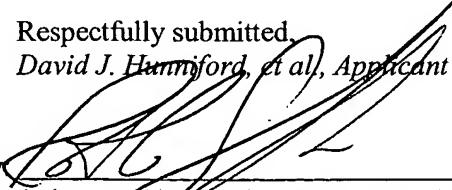
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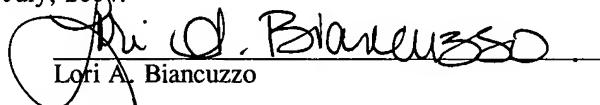
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Lori A. Biancuzzo

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**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

**PART I: Compliance with 37 C.F.R. §1.97**

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case.

No fee or certification is required.

**PART II: Information Cited**

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

With respect to reference number 22, the copy of this reference provided herein is the cleanest copy presently available to the undersigned. Although certain portions of this reference have been emphasized, this emphasis was not provided by the undersigned, and the undersigned makes no assertion that the emphasized portions of this reference are more or less relevant than those portions that have not been emphasized.

With respect to reference numbers 4, 5, 9, 10, 11, 14, 19, 21, 24, 28, and 34 the copy of this reference provided herein is the most legible copy presently available to the undersigned. Although certain portions of this reference are illegible, this illegible portion was not done by the undersigned, and the undersigned makes no assertion that the illegible portions of these references are more or less relevant than those portions that are legible.

**PART III: Remarks**

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

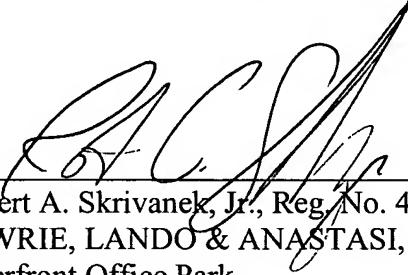
By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,  
*David J. Hunniford, et al., Applicants*

By:   
\_\_\_\_\_  
Robert A. Skrivanek, Jr., Reg. No. 41,316  
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Riverfront Office Park  
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Tel. (617) 395-7000

Docket No. D0540-700410

Date: July 27, 2004

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FORM PTO-149/A and B (Modified)

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Sheet

APPLICATION NO.:	10/700,381	ATTY. DOCKET NO.:	D0540-700410
FILING DATE:	November 4, 2003	CONFIRMATION NO.:	5795
APPLICANT:	David J. Hunniford, et al.		
GROUP ART UNIT:	1724		EXAMINER: Not Yet Assigned

**U.S. PATENT DOCUMENTS**

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			

**OTHER ART — NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	1	"Process Design Manual for Sulfide Control In Sanitary Sewerage Systems", U.S. Environmental Protection Agency, Oct. 1974, pp. 5-34 and 5-35.	
	2	BRYAN, A.C., "Experiences With Odor Control at Houston Texas", Sew. & Ind. Wastes, 28, 1512-1514 (1956).	
	3	CARPENTER, W.T. "Sodium Nitrate Used to Control Nuisance", Water Works and Sew., 79, 175 (1932).	
	4	ELIASSEN, R., et al., "The Effect of Chlorinated Hydrocarbons on Hydrogen Sulfide Production", Sew. Works Jour., 21, 457 (1949)..	
	5	FALES, A.L., "Treatment of Industrial Wastes from Paper Mills and Tannery on Neponset River", Jour. Ind. Eng. Chem., 21, 216 (1929).	
	6	HEUKELEKIAN, H., "Effect of the Addition of Sodium Nitride to Sewage on Hydrogen Sulfide Production and B.O.D. Reduction", Sewage Works Journal 15(2):255-261 (1943).	
	7	HEUKELEKIAN, H., "Some Bacteriological Aspects of Hydrogen Sulfide Production from Sewage", Sew. Works Jour. 20, 490 (1948).	
	8	LAWRANCE, W.A., "The Addition of Sodium Nitrate to the Androscoggin River", Sew. and Ind. Wastes, 22, 820 (1950).	
	9	LORGAN, G.P., et al., "Nitrate Addition for the Control of Odor Emissions from Organically Overloaded, Super Rate Trickling Filters", 33rd Ann. Purdue Ind. Waste Conf., West Lafayette, Ind., (1978).	
	10	MCKINNEY, R.E., "The Role of Chemically Combined Oxygen in Biological Systems", Jour. San. Eng. Div., proc. Amer. Soc. Civil Engr., 82 SA4, 1053 (1956).	
	11	PODUSKA, R.A., "Operation, control, and Dynamic Modeling of the Tennessee Eastman Company Industrial Wastewater Treatment System", 34th Ann. Purdue Indust. Waste Conf., Lafayette, Md. (1970).	
	12	POMERY, R.D., "Controlling Sewage Plant Odors", Consulting Eng., Feb. 101 (1963).	
	13	POMEROY, R.D., et al., "Sulfide Occurrence and Control in Sewage Collection Systems", U.S. Environmental protection Agency, EPA 600/X-85-052, Cincinnati, Ohio (1985).	
	14	PRAKASAM, T.B.S., et al., "Microbial Denitrification of a Wastewater Containing high Concentrations of Oxidized Nitrogen", Proceedings of the 31st Industrial Wste Conference, May 4-6, 1976, Purdue University.	
	15	PRICE, E.C., et al., "Sewage Treatment Plants Combat Odor Pollution Problems", Water and Sew. Works, 64-69 (1978).	
	16	REID, G.W., et al., "Sewer Odor Studies", Sew. and Ind. Wstes, 28, 991 (1956).	
	17	RYAN, W.A., "Experiences with Sodium Nitrate Treatment of Cannery Wastes", Sew. Works Jour., 17, 1227 (1956).	
	18	SANTRY, I.W., Jr., "Hydrogen Sulfide Odor Control Measures", Jour. Water Poll. Control Fed., 38 459 (1966).	
	19	SANTRY, I.W., Jr., "Hydrogen Sulfide In Sewers", Jour. Water Poll. Control Fed., 35, 1580 (1963).	
	20	"Standard Methods for the Examination of Water and Wastewater", 14th Ed., Amer. Pub. Health Assn., Wash. D.C., 499-509 1976).	
	21	PETER R. WILLENRING et al., "Calcium Nitrate" (incomplete title), Oct. 1988 or earlier.	
	22	"Biochemical Oxidation of Polluted Lake Sediment with Nitrate—A new Lake Restoration Method", 1976.	
	23	R.R. DAGUE, "Fundamentals of Odor Control", Journal Water Pollution Control Federation, 44(4): 583-594; Apr. 1972.	

FORM PTO-1449/A and B (Modified)		APPLICATION NO.: 10/700,381	ATTY. DOCKET NO.: D0540-700410
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>JUL 30 2004</i>		FILING DATE: November 4, 2003	CONFIRMATION NO.: 5795
		APPLICANT: David J. Hunniford, et al.	
Sheet	1	GROUP ART UNIT: 1724	EXAMINER: Not Yet Assigned
		<i>SEARCHED &amp; TRADEMARK OFFICE</i>	

	24	WILLIAM H. MOSS et al., "Full-scale use of physical/chemical treatment of domestic wastewater at Rocky River, Ohio", Journal Water Pollution Control Federation, 49(11): 2,249-2,254; Nov. 1977.		
	25	LEON S. DIRECTO et al., "Pilot plant study of physical-chemical treatment", Journal Water Pollution Control Federation, 649(1): 2,081-2,098; Oct. 1977.		
	26	RICHARD A. PODUSKA et al., "Successful storage lagoon odor control", Journal Water Pollution Control Federation, 53(3): 299,310; Mar. 1981.		
	27	POMEROY, JOHNSTON AND BAILEY, "Process Design Manual For Sulfide Control in Sanitary Sewage Systems", Oct. 1974.		
	28	"Basic Research On Sulfide Occurrence and Control In Sewage Collection Systems", National Technical Information Service, a-5 (Feb. 28, 1969).		
	29	BEARDSLEY, C.W., et al., "Removal of Sewer Odors By Scrubbing WIth Alkaline Solutions", Sewage and Industrial Wastes, vol. 30, 220 (1958).		
	30	LANG, M., "Chemical Control of Water Quality In A Tidal Basin", Journal WPCF, 1410-1418 (1966).		
	31	SANBORN, N.H., "Nitrate Treatment of Cannery Waste", The Fruit Products Journal and American Vinegar Industry, (1941).		
	32	"Methods For Chemical Analysis of Water and Wastes", U.S. Environmental Protection Agency, (1974).		
	33	PAINTER, H.A., "A Review of Literature on Inorganic Nitrogen Metabolism in Microorganisms", Water Research, The Journal of the International Association on Water Pollution Research, vol. 4, No. 6, (1970).		
	34	POMEROY, R.D., et al., "Feasibility Study on In-Sewer Treatment Methods", Municipal, Environmental Research Lab, Chapter 6, "Chemical Treatment", 77 (1977).		
	35	THISTLETHWAYTE, D.K.B., "The Control of Sulphides In Sewerage Systems", Ann Arbor Science Publishers Inc., Chapter 13, "Corrective Measures For Existing Systems", 159 (1972).		
	36	"Water Supply and Sewerage", Ernest W. Steel, Chapter 27, pp. 600-601 (4th Ed. 1960).		

EXAMINER	DATE CONSIDERED

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_\_, filed \_\_\_, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications), or a copy of this reference need not be provided as the reference is a published U.S. Patent or U.S. Patent application and the present application was filed after June 30, 2003.

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]